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February 1963

PHOTOGRAPHIC INTERPRETATION REPORT

ICBM LAUNCH COMPLEX VERKHNYAYA SALDA, USSR



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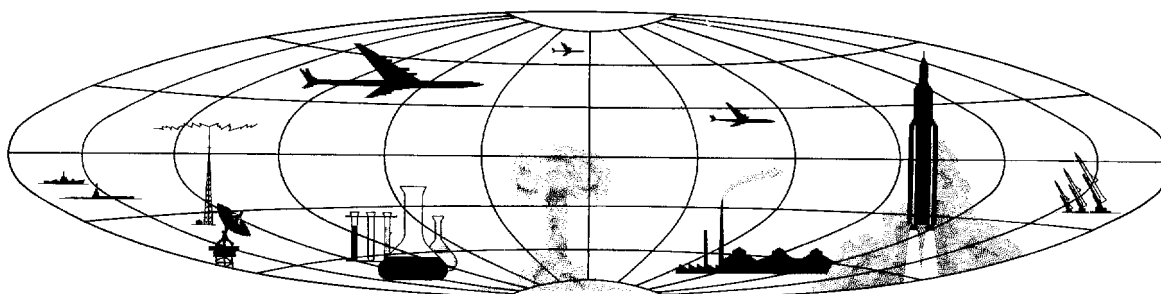
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INTRODUCTION

An ICBM launch complex is located in a forested area north of Verkhnyaya Salda. The complex consists of seven launch areas, a complex support facility with a rail-to-road transfer point, [redacted] and small areas of support activity (Figure 1).

The photographic coverage of the launch complex area is listed in chronological order below with the status of facilities observed on each coverage:

[redacted] Beginning construction of rail spur now serving complex support facility.

[redacted] Probable support facility and main complex access road. Small scale and darkness preclude further identification.

[redacted] Launch Areas A and B identified; remainder of complex cloud covered.

[redacted] Entire complex covered by fair-quality photography. Launch Areas A, B, and C completed; Area D in the late-to-completed stage; Area F in midstage; Areas E and G early stage of construction.

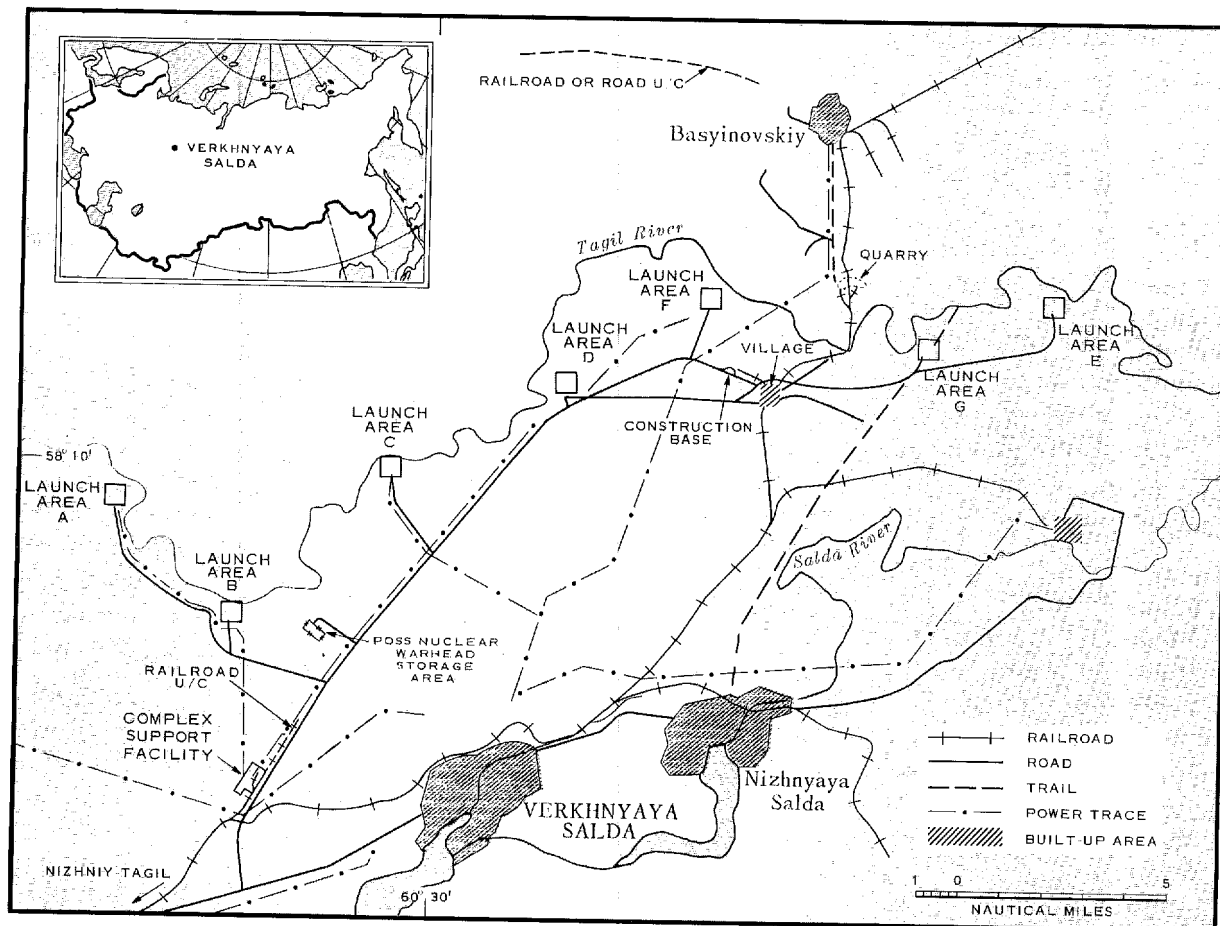


FIGURE 1. VERKHNYAYA SALDA ICBM COMPLEX.

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[redacted] Good quality. Launch Areas D, E, and G partially obscured by clouds and haze. Launch Area F being backfilled.

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[redacted]
Launch Area D completed; Area E cloud covered; excavation at Area F backfilled; Area G partially obscured by clouds, excavation activity continuing.

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[redacted]
Launch Area E midstage of construction; construction activity within excavation at Area G.

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[redacted] Launch Areas E, F, and G were cloud covered.

The ICBM launch complex is situated in an area of heavy SA-2 SAM defenses. Two SA-2 sites have been associated with the defense of the launch complex, one at 58-43N 61-03E and the other at 58-04N 61-01E. Another SA-2 site is located 15 nm north of the complex at 58-20N 60-15E. In addition, four SA-2 sites are located around Nizhnaya Tura and three around Nizhniy Tagil.

Four of the launch areas of the complex are located along the edge of the Tagil River. This positioning suggests the possibility that the complex was originally intended to accommodate rail-served launch pads atop the escarpment above the river similar to those located at Plesetsk. Other factors supporting this possibility are the early construction of the rail spur and the large complex support facility. A survey line for the rail spur extending beyond the present location of the complex support facility was visible on [redacted] photography. On [redacted] photography, a faint trace of this survey line is still visible beyond the point where the rail line terminates at the transfer point.

A road, leading north from the Nizhniy Tagil - Verkhnyaya Salda highway through the complex support facility, has been constructed to serve the launch areas. Wide-radius turns are evident at intersections where access roads branch from the complex main road to the launch areas.

LAUNCH AREAS

Seven launch areas comprise the launch facilities of the complex. Five of these (Areas A, B, C, D, and E) are Type II launch areas and two (Areas F and G) are Type III launch areas. Launch Areas B and C have a Type II (Mod a) configuration with the two missile-ready buildings positioned on an apron along the center road of the area. The buildings are parallel to each other and to the long axis of the area. These were probably the first two launch areas constructed at this complex. Launch Areas A, D, and E are Type II (Mod b) with the ready buildings positioned to the rear of and in line with the launch pads. None of the launch areas within

the complex have the ready buildings canted at an angle to the long axis of the launch pad, as has been observed at some other deployed launch areas. Power traces or ground scars lead to all launch areas except Areas E and G, where it may closely parallel the road and not be discernible. All the Type II launch areas are secured by double fences enclosing an area of 85 to 90 acres.

Construction of Launch Areas A, B, C, and D is completed and Launch Area E is in a mid-stage of construction. Launch Areas F and G are both under construction with F being the most advanced. No definite stage of construction has

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been assigned to these launch areas as a completed hardened site has not yet been observed. The azimuth of the long axis of the Type II launch areas is 345 degrees, ± 5 degrees. The azimuth of the short axis of the excavations at Type III areas is 45 degrees, ± 5 degrees.

The average length of the elongated launch pads of the Type II areas is approximately 370 feet, and the distance between launch pads averages about 980 feet. The launch pads at Areas A and D have a horizontal structure located in the center of the pads. A similar structure is slightly to the rear of the pad center at Areas B and C. This structure, probably a missile-erecting device, apparently is a permanent facility built into the pads. The average length of these structures is about 110 feet.

Launch Areas B and C have short roads curving off from the inside of the pads to a semi-underground or earth-covered structure. A similar pattern is found at Areas A and D with

the roads leading to the outside of the pads. These facilities are probably utilized for the protection of vehicles containing mobile checkout equipment or fuel trucks.

LAUNCH AREA A

Launch Area A has a Type II (Mod b) configuration, and the forward end of the ready buildings is about 600 feet from the center of the launch pads (Figure 2). The left ready building is approximately 170 by 125 feet and the right one 170 by 105 feet.

On photography from [] the structure on the launch pad to the right appears to cast a triangular shadow. This appearance may be caused by the partial erection of equipment toward the forward end of the launch pad.

The access road through the launch area is offset to the right of center. A probable control building or bunker is located to the left of the

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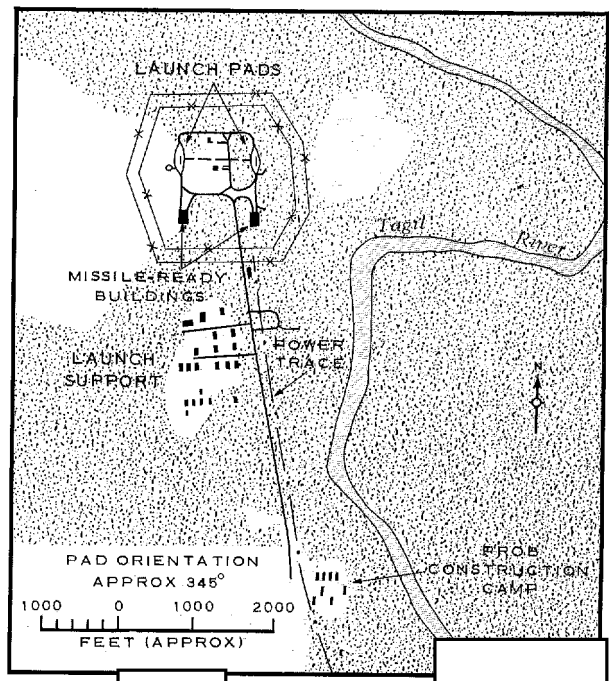
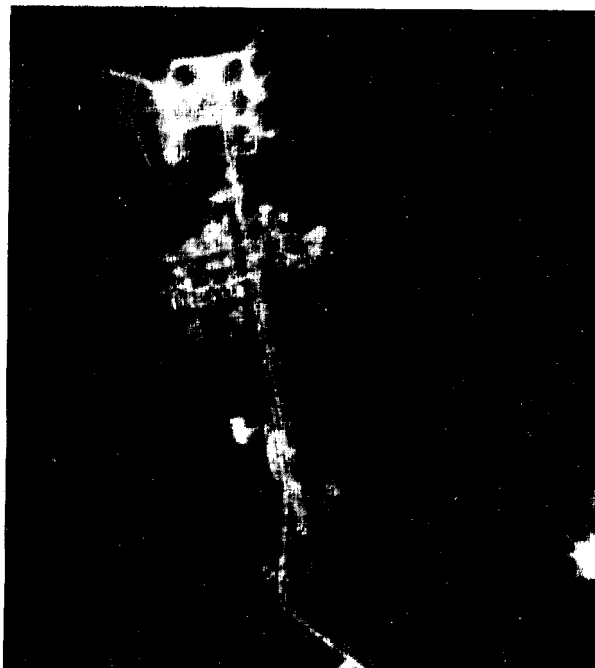


FIGURE 2. LAUNCH AREA A AS OF []

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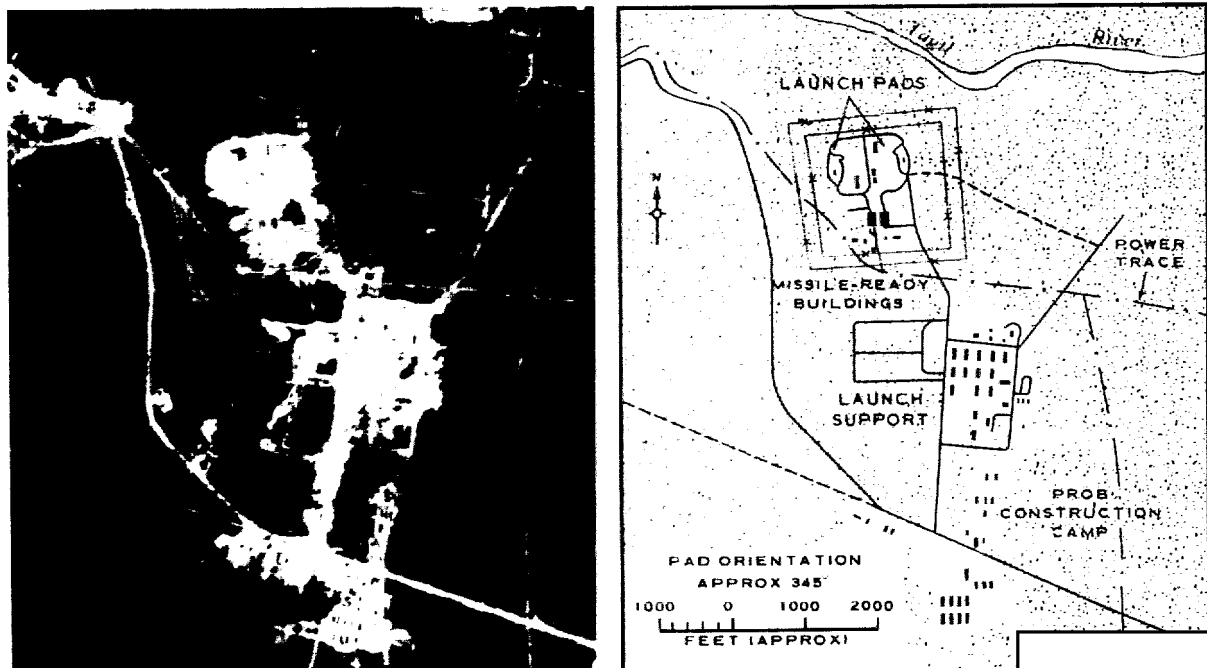


FIGURE 3. LAUNCH AREA B AS OF [redacted]

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road, equidistant from launch pads. The structure is approximately 90 by 75 feet and may be semiburied. A scarred area located just forward of the probable control bunker may be caused by traffic between pads or by buried cables between the control bunker and the launch pads. One other structure is located at the forward end of the launch area.

The launch support facility consisting of about 20 buildings of various sizes is located 2,500 feet south of the launch area. Fifteen of the larger buildings range in length from 115 to 140 feet. Seven of these buildings probably provide technical support and are arranged in a pattern similar to that of other launch support facilities. To the rear of the support facility along the access road is an area containing miscellaneous buildings, a small borrowpit, and scarring. This activity probably represents the construction camp supporting the construction of the launch area.

LAUNCH AREA B

Launch Area B has a Type II (Mod a) configuration, and the ready buildings measure approximately 170 by 105 feet (Figure 3). Two buildings, one a probable control bunker, are located just to the right of the center road through the launch area. Two scars between launch pads pass on either side of the probable control bunker. To the left of the center road and forward of the ready buildings is an area about 140 by 85 feet which may be a semiunderground or a low structure. Another building, 100 by 45 feet, is located at the forward end of the launch area to the right of the center road.

Just forward of the ready buildings a short road leads to the left and terminates directly to the rear of the left launch pad in a clearing that contains an unidentified structure. Another clearing is located just off the access road on the right side of the launch area. This clearing

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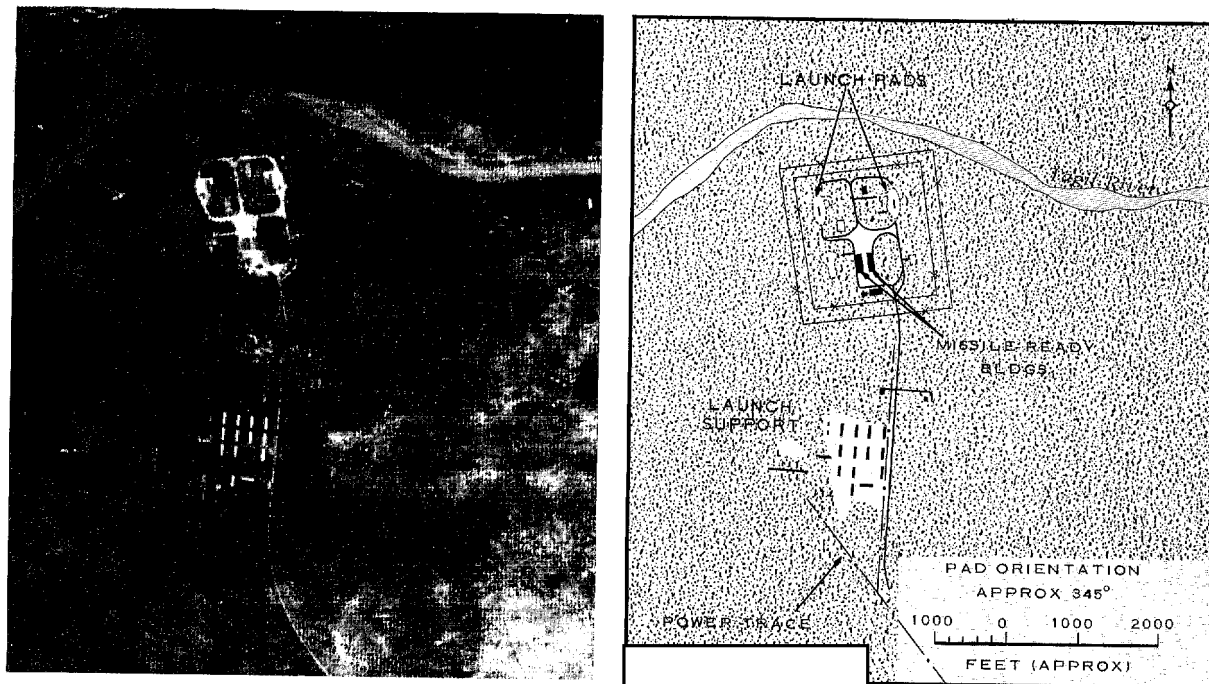


FIGURE 4. LAUNCH AREA C AS OF [redacted]

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is not directly in line with the launch pad but is offset to the right. No facilities can be observed within this clearing.

The launch support facility, located between the complex main road and the launch area, consists of 15 buildings about 140 feet in length and about 10 smaller structures. One low structure, possibly earth covered, is located on the eastern edge of the support facility and is encircled by a road. At the northern edge of the support facility, two short roads appear to lead into a circular road pattern about 250 feet in diameter. A portion of the road is not visible and may be obscured by a small drive-through structure. A network of roads and scarring indicates construction activity west of the support facility, across the access road. To the rear of the support facility and scattered along both sides of the complex main road is a probable construction camp of about 25 structures of various sizes.

LAUNCH AREA C

Launch Area C has a Type II (Mod a) configuration, and the two ready buildings measure approximately 170 by 105 feet (Figure 4). A probable control bunker is located to the right of the center road between launch pads. Two structures, both approximately 140 feet in length, are located in the same position as at Launch Area B -- one at the forward end of the launch area and the other slightly to the rear of the launch pads. A few smaller structures are located to the rear of the ready buildings. As at Launch Area B, a small structure is located at the end of a road behind the left pad, and a clearing is located off the access road along the right side of the launch area.

The launch support facility to the rear of the launch area contains 14 buildings 140 by 40 feet and at least 10 smaller structures. A probable construction camp with track activity and 10 to 15

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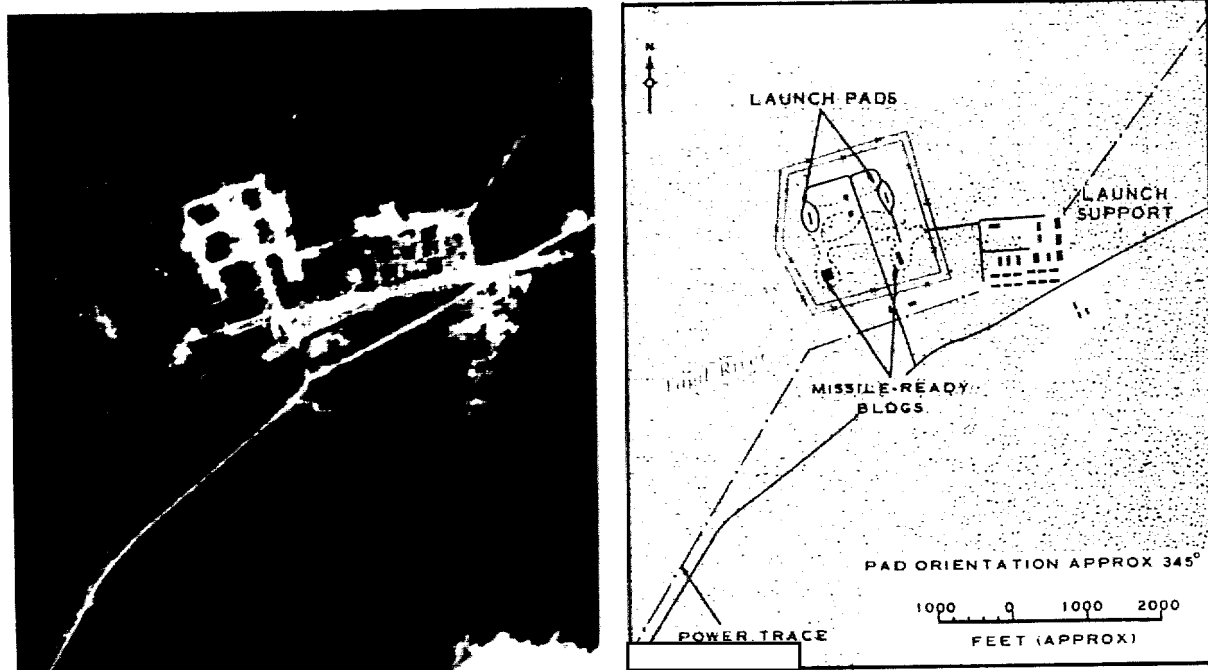


FIGURE 5. LAUNCH AREA D AS OF [redacted]

structures is located near the intersection of the complex main road and the access road to the launch area.

LAUNCH AREA D

Launch Area D has a Type II (Mod b) configuration and appears complete except for the absence of the ready building for the right pad (Figure 5). One ready building approximately 170 by 105 feet is located behind the left pad. On photography from [redacted] a small structure was located in the clearing behind the right pad. This structure appears larger on [redacted] and may be the second ready building. The launch support facility lies adjacent to the east side of the launch area and contains at least 11 buildings which appear to be the same size as those at other launch areas. Twelve other structures, approximately 100 feet in length, are located in two rows along a clearing and probably serve as personnel quarters.

LAUNCH AREA E

Launch Area E has a Type II (Mod b) configuration and appears to still be in the midstage of construction (Figure 6). One ready building is under construction behind the left launch pad. A probable control bunker, approximately 70 feet long, is centrally located to the left of the center road. A hard surface has been prepared at the left launch pad, but only scarring and construction activity is evident along the right side of the launch area. A building area is located about 4,000 feet west of the launch area and north of the complex main road. Four large buildings are located close to the road, and just to the north there is a probable housing area of about 15 buildings.

LAUNCH AREAS F AND G

Launch Areas F and G, first observed in [redacted] have a Type III, silo configura-

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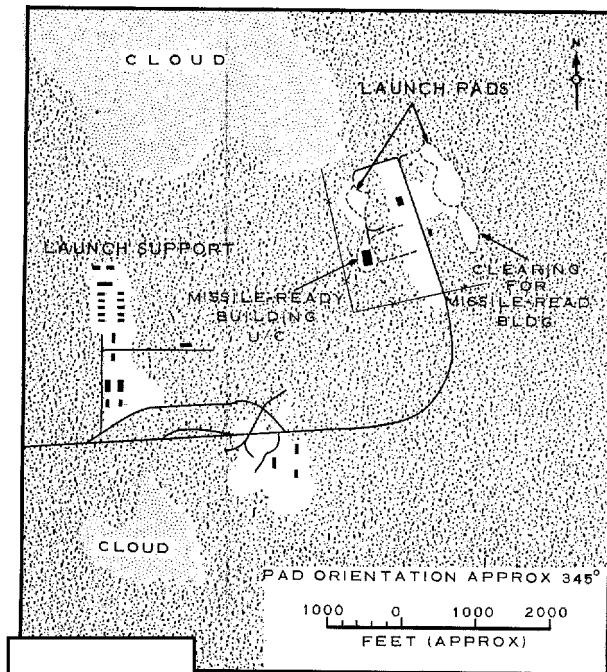


FIGURE 6. LAUNCH AREA E AS OF [REDACTED]

tion. They display the same pattern of excavation and structures as found at launch areas D1 and D2 at the Tyura Tam Missile Test Center and at similar deployed areas.

The launch areas are constructed as a roughly rectangular excavation with a notched-out area on one side. The excavation at Launch Area F was about 500 by 200 to 300 feet, but when observed in [REDACTED] some backfilling had taken place (Figure 7). Within the notched area, which appears to be shallower than the remainder of the excavation, is a control bunker about 120 by 85 feet. Two structures are located within the deepest portion of the excavation. These structures appear to be about 70 feet square and about 200 feet apart, center to center. Two indistinct circular objects, possibly some type of foundations, appear at the outer ends of the two silos. A similar type of object may be located between the silos. Along the long axis of the excavation, between the control bunker and the other struc-

tures, is a wall or natural ledge about 300 feet long and 10 to 15 feet wide.

[REDACTED] backfilling appears to have been completed at Launch Area F; however, the wall and two square structures are still evident as is a third object that is barely discernible between them. No change is apparent at Area F on photography of [REDACTED]

Launch Area G as observed on photography [REDACTED] consisted of a clearing and the start of an excavation. On photography of [REDACTED] the notch in the excavation was evident, and one or two structures or objects were being constructed in the deepest part of the excavation (Figure 8). Activity at the excavation covers an area of about 800 by 500 feet.

Both launch areas are served by road from the complex main road. A power trace from Launch Area D enters Launch Area F and appears to terminate at a small structure northwest of the control bunker.

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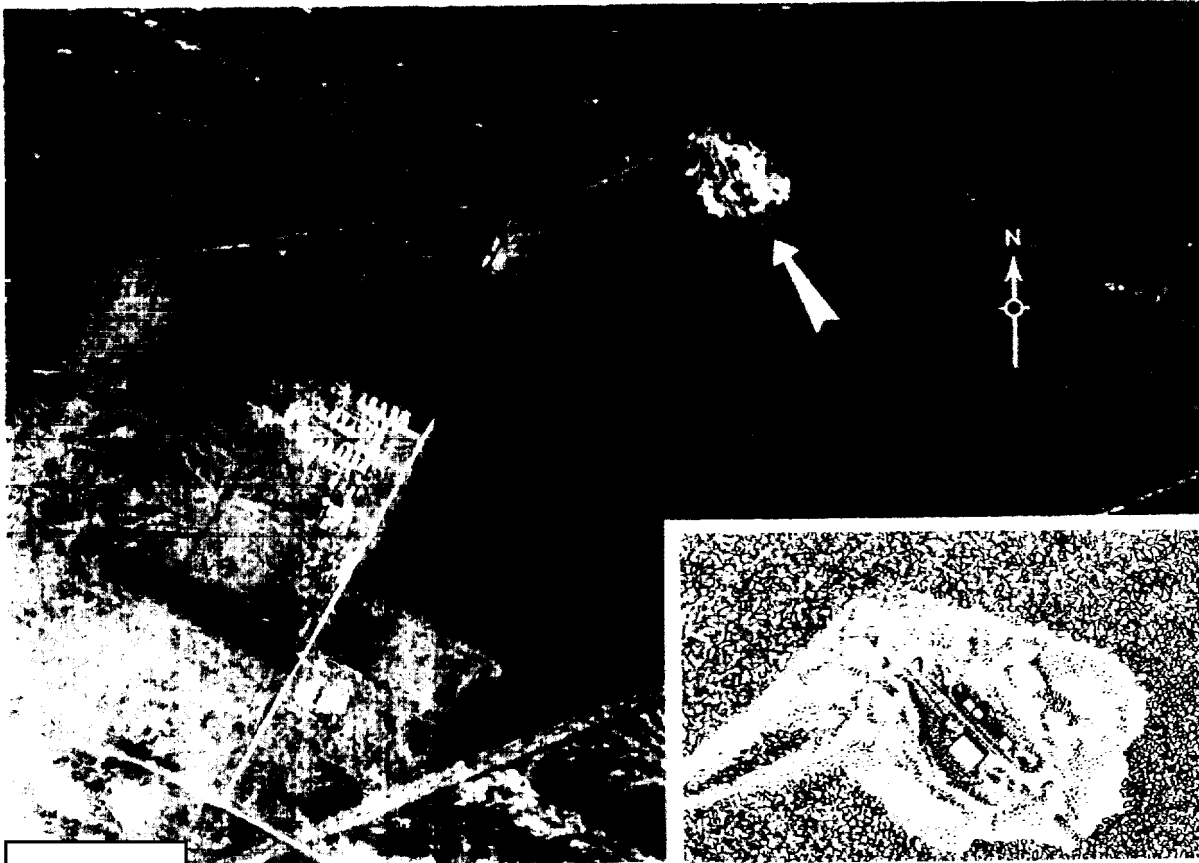


FIGURE 7. LAUNCH AREA F

The launch support facility for Launch Area F is located west of the access road between the launch area and the complex main road. It consists of 6 multistory buildings 135 by 60 to 70 feet, 12 smaller barracks-type buildings, 2 warehouse-type buildings about 130 by 60 feet, and several small structures.

No local support is yet evident at Launch Area G. One building about 120 feet long and three or four smaller associated structures are located along the access road. Further to the west along the complex main road some scarring and track activity, which may be the start of a support facility, was evident on photography of



FIGURE 8. LAUNCH AREA G

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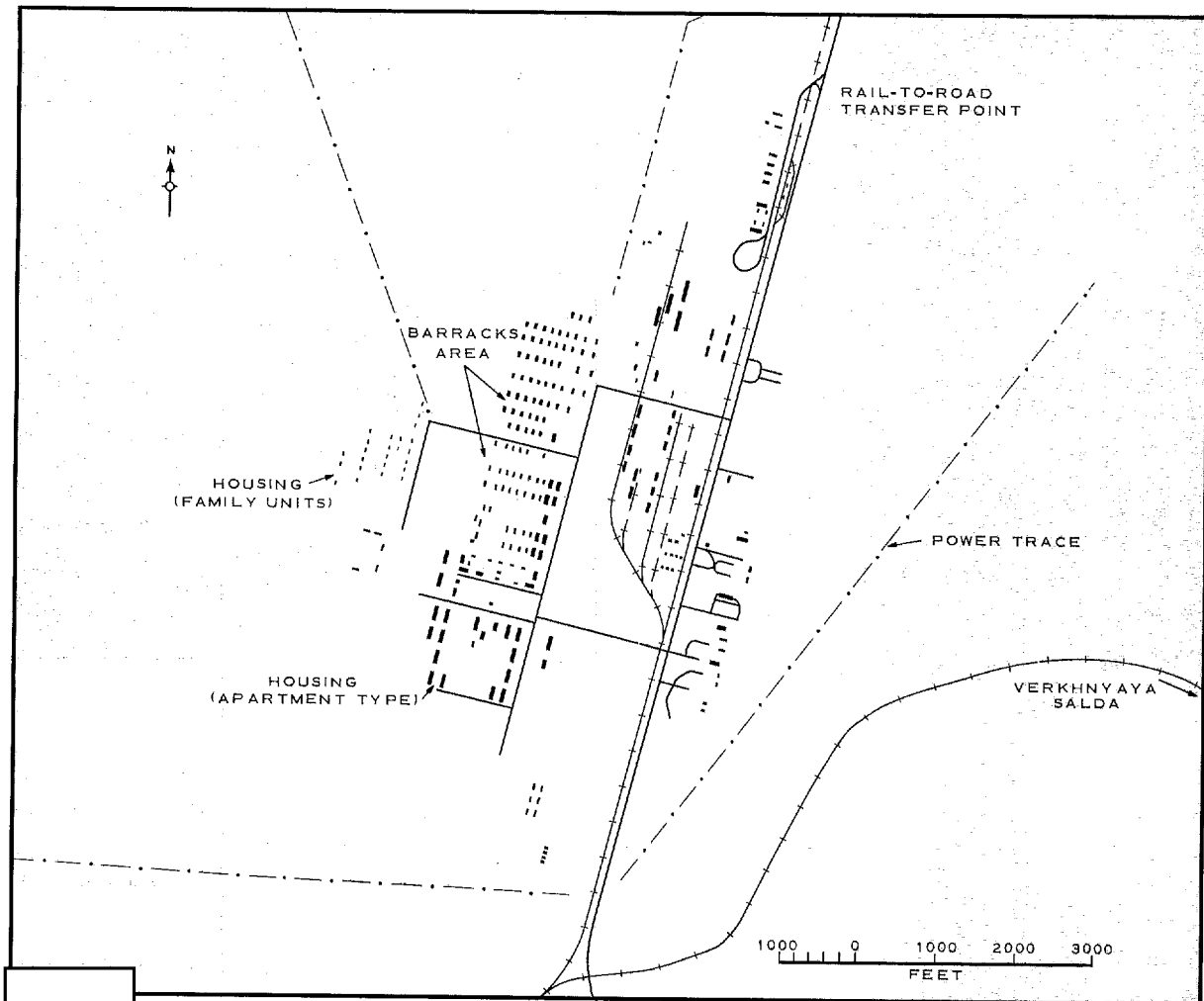


FIGURE 9. COMPLEX SUPPORT FACILITY.

COMPLEX SUPPORT FACILITY

The large rail- and road-served complex support facility containing about 240 buildings and structures is located 5 nm west of Verkhnyaya Salda. The facility serves as a combination housing area, construction camp, logistical support area, and rail-to-road transfer point, and encompasses an area of approximately 1.5 by 0.7 nm (Figure 9). A road leads from the Nizhniy Tagil - Verkhnyaya Salda highway, proceeds through the support facility, and becomes the

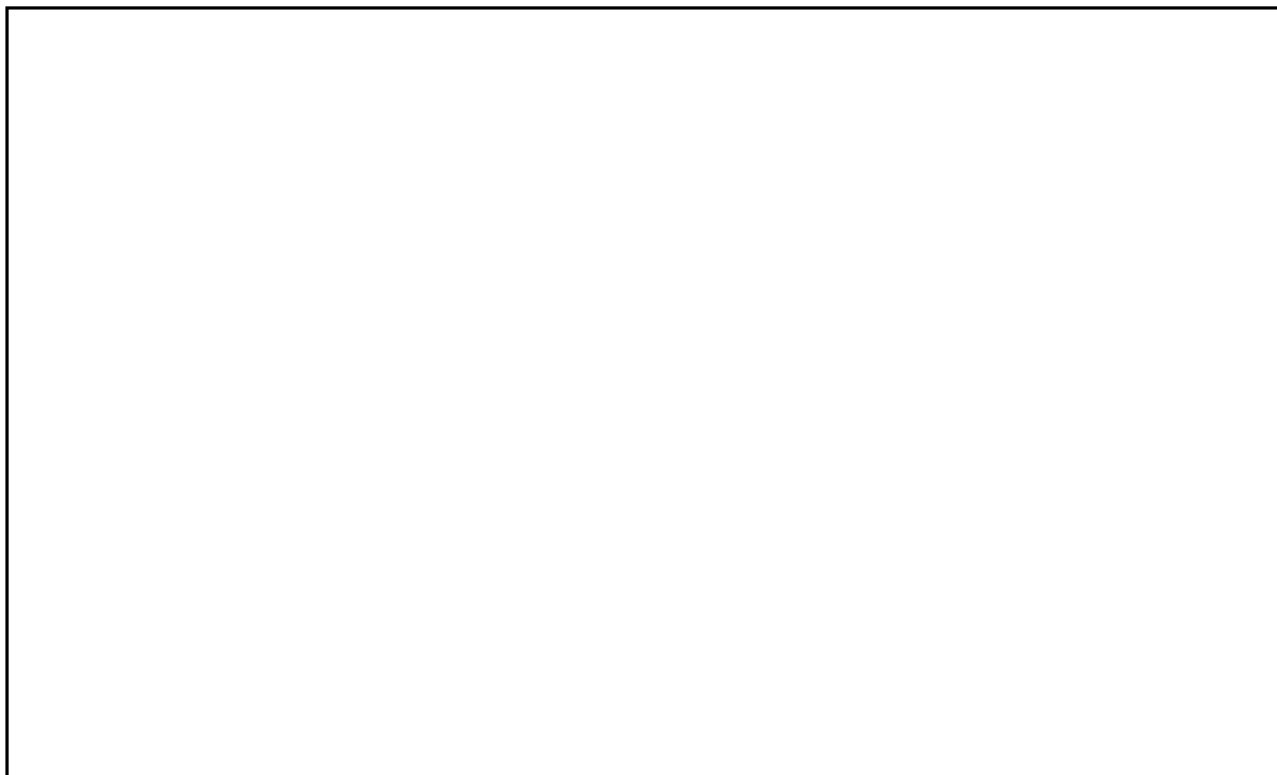
complex main road. The rail spur serving the support facility branches from the rail line between Nizhniy Tagil and Verkhnyaya Salda at a point 13 nm east of Nizhniy Tagil and extends one nm to the support facility. Preliminary construction of the rail spur was underway on [redacted] photography of [redacted]. Only a few hundred feet of roadbed had been constructed at that time, but a survey line extended approximately 2.5 nm to the northeast.

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An area of multistory housing units containing 17 buildings 220 by 40 feet is located at the southern end of the support facility. Five nearby smaller structures arranged in a U-shaped pattern are probably apartment-type buildings. A probable family-type housing unit of 24 small structures is located on the west side of the area. A barracks area with about 90 small structures and 9 multistory barracks 130 by 40 feet occupies the northern part of the support area. Several other miscellaneous buildings of various sizes are situated throughout this area.

The main rail spur branches into at least two and probably four spurs serving a logistical support area east of the barracks area. Thirteen large warehouse-type buildings are located along the rail spurs with 12 to 15 smaller structures in the immediate area. The westernmost rail spur continues on to an area of a probable con-

struction camp. Four long structures or piles of material are near the rail spur along with a probable concrete batching plant. Open storage, piles of material, and track activity are evident throughout this area.

Along the eastern side of the complex main road is an area of activity with an irregular road net, 15 to 20 small structures, and three probable warehouse buildings, one of which may be drive-through.

The rail-to-road missile transfer point is located at the northern end of the support facility. The main rail spur enters this area with a spur appearing to curve around two small structures, then terminating on a fill. A road paralleling the rail spur joins the complex main road at one end with a Y intersection and terminates in a loop pattern at the other end. The total length of the road, including the loop, is 3,100 feet. The turn-

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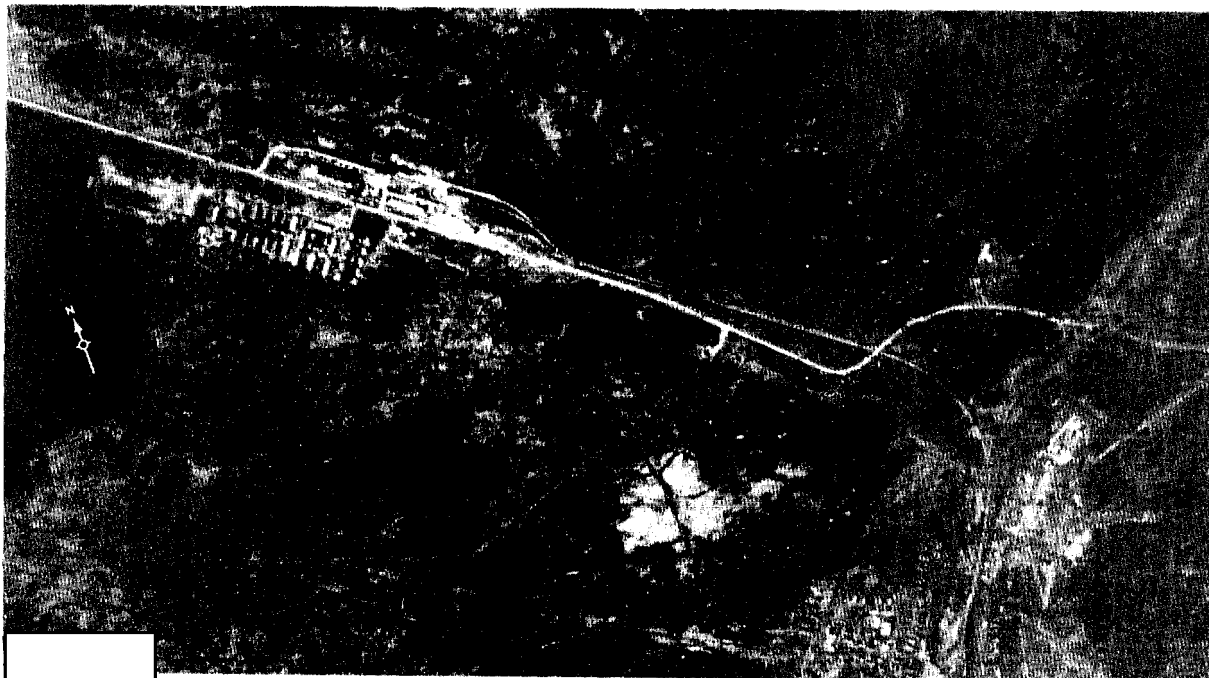


FIGURE 11. CONSTRUCTION BASE

ing radius of the loop is approximately 145 feet. A light-toned area is evident on one side of the loop indicating an apron or loading facility, pos-

sibly associated with an underground or bunkered facility. Twelve to 15 structures are positioned near the road.

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CONSTRUCTION BASE

This installation probably serves as a forward construction camp for the launch complex and as a facility for handling materials shipped by rail for transfer to construction sites. It lies on both sides of the complex main road and is served by rail from the line serving the area of peat cutting and processing around the villages of Basyanovskiy. The spur line branches into two sidings within the installation (Figure 11).

The primary activity is concentrated in an area about 3,500 by 600 feet paralleling the complex main road along the northern side. Open

storage and piles of material are evident throughout the area. Two buildings are located in this area. One is 325 by 65 feet and is adjacent to a probable concrete batch plant; the other is a warehouse-type building 155 by 70 feet near the terminus of the northernmost rail spur.

South of the complex main road is a housing area containing 8 multistory quarters 140 by 40 feet, 10 smaller barracks-type buildings, 9 probable multifamily-type quarters, and several small miscellaneous structures.

COORDINATES OF FACILITIES

Launch Area A	58-09N 60-16E
Launch Area B	58-06N 60-22E
Launch Area C	58-10N 60-28E
Launch Area D	58-12N 60-34E
Launch Area E	58-14N 60-54E
Launch Area F	58-14N 60-41E
Launch Area G	58-13N 60-49E
Complex Support Facility	58-02N 60-23E
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Construction Base	58-13N 60-42E

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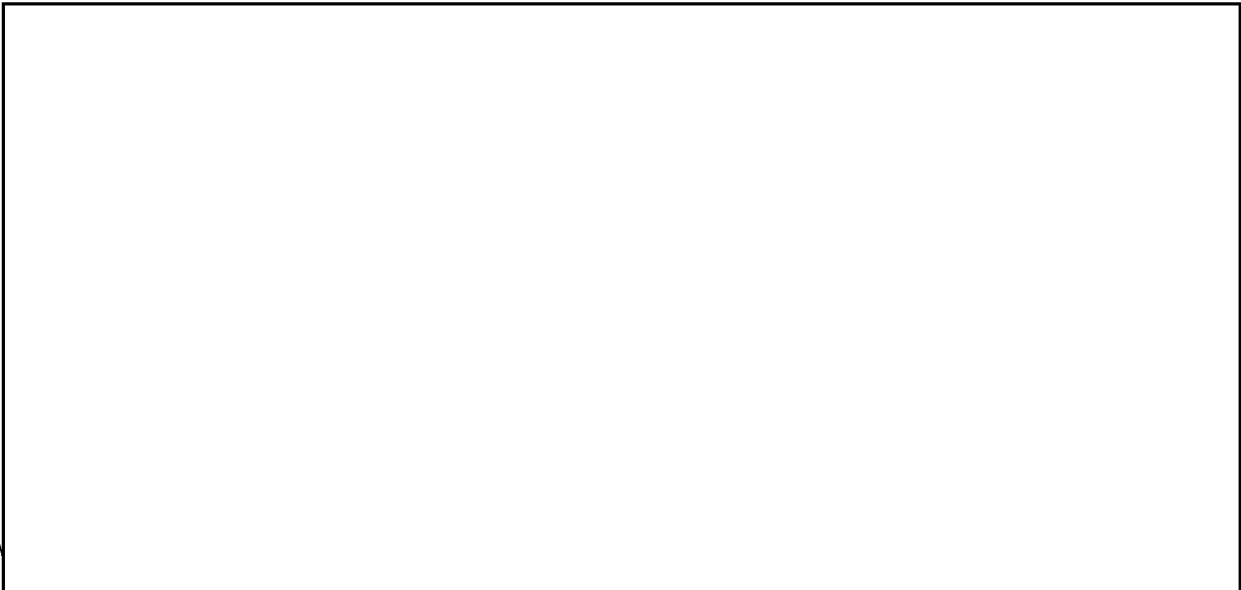
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DOCUMENT

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REQUIREMENTS

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NPIC PROJECT

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